

## ABSTRACT

The present invention is a butt welding apparatus and a butt welding method where end faces of at least one plate member to be welded are butted to each other to form a butt portion, and butt welding can be performed on respective plate members to be welded which have various thickness sizes on both side portions of the butt portion with electric resistance heat by a pair of two electrode members which are made common to the respective plate members and are supplied with power. At least one electrode member (1) of a pair of electrode members (1, 2) for butt-welding two plate members (31, 32) is provided on an outer face thereof with a retreating-shaped portion (1A) which gradually retreats from one plate member (31) of the two plate members (31, 32) according to extension from an intermediate portion, in a thickness direction, of the one electrode member (1) along the one plate member (31). Butt welding of the two plate members (31, 32) is performed in a state that the position of the butting portion (71) of these plate members (31, 32) has been offset from intermediate portions, in thickness directions, of the electrode members (1, 2) to the retreating-shaped portion (1A) by an amount (L1) corresponding to a difference in thickness between the plate members (31, 32), and butt welding of two other plate members having different thickness sizes is performed with a changed offset amount.

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関  
国際事務局(43) 国際公開日  
2004 年 12 月 16 日 (16.12.2004)

PCT

(10) 国際公開番号  
WO 2004/108340 A1

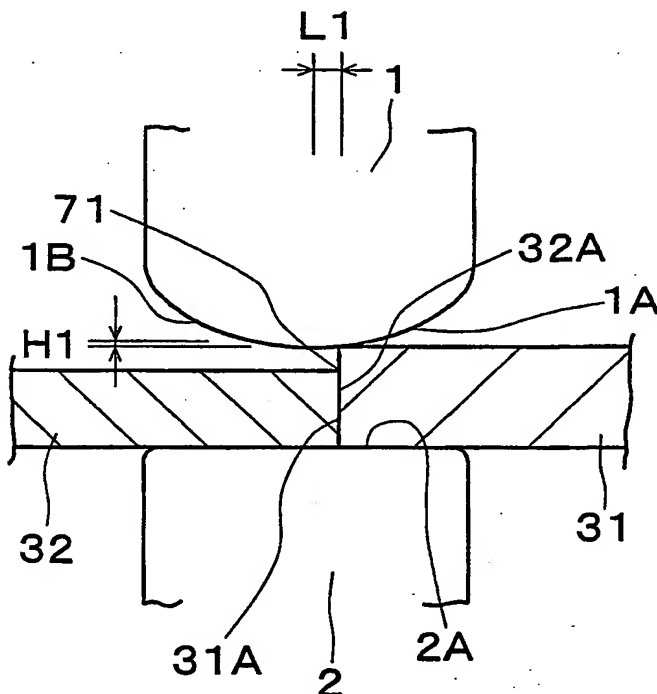
- (51) 国際特許分類<sup>7</sup>: B23K 11/30
- (21) 国際出願番号: PCT/JP2004/007743
- (22) 国際出願日: 2004 年 5 月 28 日 (28.05.2004)
- (25) 国際出願の言語: 日本語
- (26) 国際公開の言語: 日本語
- (30) 優先権データ:  
特願2003-160548 2003 年 6 月 5 日 (05.06.2003) JP
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- (81) 指定国 (表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[続葉有]

(54) Title: BUTT WELDING DEVICE AND BUTT WELDING METHOD

(54) 発明の名称: 突き合わせ溶接装置及び突き合わせ溶接方法



(57) **Abstract:** Of a pair of electrode members (1, 2) for butt welding two plates (31, 32), at least one electrode member (1) has an outer surface formed as a retracted shape section (1A) which gradually retracts from one plate (31) as it extends from the thickness-wise intermediate portion of the one electrode member (1) toward one plate (31) of the two plates (31, 32). The butt welding of the two plates (31, 32) is effected by offsetting the position of the butt portion (71) of these plates (31, 32) from the thickness-wise intermediate portion of the electrode members (1, 2) toward the retracted shape section (1A) by an amount (L1) corresponding to the difference in thickness between these plates (31, 32), while the butt welding of other two plates different in thickness is effected by changing the offset.

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